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- *Admitted only in Virginia
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Federal Agencies

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Hand Carry to Examiner Sharon L. Turner
Art Unit 1647



Stamps: U.S. National Cancer Institute : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 & 202.371.2540 : www.fda.gov/oc/foia

Commissioner for Patents
March 1, 2005
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.


#47,756
 Helene C. Carlson
Agent for Applicants
Registration No. 47,473

EKS/HCC/eaf
Enclosures

336774v1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Li *et al.*

Appl. No.: 10/791,905

Filed: March 4, 2004

For: **Human G-Protein Chemokine**

Receptor (CCR5) HDG NR10

Confirmation No.: 3954

Art Unit: 1647

Examiner: Sharon L. Turner

Atty. Docket: 1488.115000P/EKS/HCC

Second Supplemental Information Disclosure Statement

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Second Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' First Supplemental Information Disclosure Statement filed on January 14, 2005, in connection with the above-captioned application.

The Examiner's attention is directed to the following co-pending application:

U.S. Application No. 10/994,679 (our Docket No. 1488.115000Q), inventors Roschke *et al.*, filed November 23, 2004, not yet published (Document AR 64), which is directed to related technical subject matter. Pursuant to 37 C.F.R. § 1.183, a copy of this U.S. Patent Application is not provided (*see also* O.G. October 19, 2004). The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to this application now or upon issuance of the present application as a patent. The

Examiner is respectfully requested to consider the cited application and the art cited therein during examination.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign

patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).
- ☒ 7. Copies of documents AM21-AO21 and AR40-AT63 are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications, documents AC4-AJ4, cited on the attached Form PTO-1449 are submitted.
- ☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed

_____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

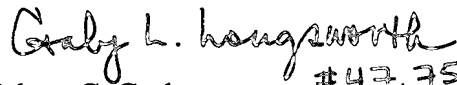
- ☐ 9. It is expected that the examiner will review the prosecution and cited art in the parent application no. _____ in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

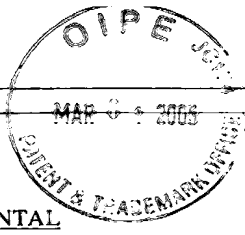
Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

for  #47,756
Helene C. Carlson
Agent for Applicants
Registration No. 47,473

Date: March 1, 2005

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600



FORM PTO-1449

SECOND SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENTATTY. DOCKET No.
1488.115000P/EKS/HCC
APPLICANT(S)
Li *et al.*
FILING DATE
March 4, 2004APPLICATION No.
10/791,905
ART UNIT
1647

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|---------------------|-----|--------------------|------------|-----------------------|-------|-----------|-------------|
| | AA | | | | | | |
| | AB | | | | | | |
| | AC4 | 6,107,019 | 08/22/2000 | Allaway <i>et al.</i> | | | 06/13/1997 |
| | AD4 | 6,344,545 | 02/05/2002 | Allaway <i>et al.</i> | | | 04/02/1997 |
| | AE4 | 6,448,375 | 09/10/2002 | Samson <i>et al.</i> | | | 04/09/1997 |
| | AF4 | 6,528,625 | 03/04/2003 | Wu <i>et al.</i> | | | 07/11/1997 |
| | AG4 | 6,692,938 | 02/17/2004 | Samson <i>et al.</i> | | | 08/24/2001 |
| | AH4 | 6,797,811 | 09/28/2004 | Gray <i>et al.</i> | | | 12/20/1996 |
| | AI4 | 6,800,447 | 10/05/2004 | Samson <i>et al.</i> | | | 08/24/2001 |
| | AJ4 | 20010000241 | 04/12/2001 | Li <i>et al.</i> | | | 11/29/2000 |
| | AK | | | | | | |

FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|---------------------|------|--------------------|------------|---------|-------|-----------|-------------|
| | AL | | | | | | Yes No |
| | AM21 | WO 98/02151 | 01/22/1998 | WIPO | | | Yes No |
| | AN21 | WO 98/11218 | 03/19/1998 | WIPO | | | Yes No |
| | AO21 | WO 01/058915 A3 | 08/16/2001 | WIPO | | | Yes No |
| | AP | | | | | | Yes No |

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

| | | | |
|--|----|-----------|--|
| | AR | <u>40</u> | Baba, M., <i>et al.</i> , "A small-molecule, nonpeptide CCR5 antagonist with highly potent and selective anti-HIV activity," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 96:5698-5703, National Academy of Sciences (May 1999) |
| | AS | <u>40</u> | BD Pharmingen™ Technical Data Sheet, "R-Phycoerythrin (R-PE)-Conjugated Mouse Anti-human Monoclonal Antibody," Revision 002, BD Biosciences Pharmingen (August 2004) |
| | AT | <u>40</u> | Björndal, A., <i>et al.</i> , "Coreceptor usage of primary human immunodeficiency virus type 1 isolates varies according to biological phenotype," <i>J. Virol.</i> 71(10):7478-7487, American Society for Microbiology (1997) |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPFP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| | AR | <u>41</u> | Blanpain, C., <i>et al.</i> , "Multiple charged and aromatic residues in CCR5 amino-terminal domain are involved in high affinity binding of both chemokines and HIV-1 Env protein," <i>J. Biol. Chem.</i> 274(49):34719-34727, American Society for Biochemistry and Molecular Biology (December 1999) |
| | AS | <u>41</u> | Blanpain, C., <i>et al.</i> , "Extracellular cysteines of CCR5 are required for chemokine binding, but dispensable for HIV-1 coreceptor activity", <i>J. Biol. Chem.</i> 274(27):18902-18908, American Society for Biochemistry and Molecular Biology (July 1999) |
| | AT | <u>41</u> | Bleul, C.C., <i>et al.</i> , "The HIV coreceptors CXCR4 and CCR5 are differentially expressed and regulated on human T lymphocytes", <i>Proc. Natl. Acad. Sci. U.S.A.</i> 94:1925-1930, National Academy of Sciences (1997) |

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| | AR | <u>42</u> | Chackerian, B., <i>et al.</i> , "Induction of autoantibodies to mouse CCR5 with recombinant papillomavirus particles," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 96:2373-2378, National Academy of Sciences (1999) |
| | AS | <u>42</u> | Davies, B. and Morris, T., "Physiological parameters in laboratory animals and humans," <i>Pharmaceut. Res.</i> 10:1093-1095, Plenum Publishing Corp. (1993) |
| | AT | <u>42</u> | Dejucq, N., <i>et al.</i> , "Expanded tropism of primary human immunodeficiency virus type 1 R5 strains to CD4+ T-cell lines determined by the capacity to exploit low concentrations of CCR5," <i>J. Virol.</i> 73(9):7842-7847, American Society for Microbiology (1999) |

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| | AR | 43 | Doranz, B.J., <i>et al.</i> , "A small-molecule inhibitor directed against the chemokine receptor CXCR4 prevents its use as an HIV-1 coreceptor," <i>J. Exp. Med.</i> 186(8):1395-1400, The Rockefeller University Press (October 1997) |
| | AS | 43 | Dragic, T., <i>et al.</i> , "A binding pocket for a small molecule inhibitor of HIV-1 entry within the transmembrane helices of CCR5," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 97(10):5639-5644, National Academy of Sciences (May 2000) |
| | AT | 43 | Dürig, J., <i>et al.</i> , "Differential expression of chemokine receptors in B cell malignancies," <i>Leukemia</i> 15(5):752-756, Nature Publishing Group (May 2001) |

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| | AR | <u>44</u> | Dybul, M., <i>et al.</i> , "Guidelines for using antiretroviral agents among HIV-infected adults and adolescents. The panel on clinical practices for treatment of HIV," <i>Annals of Int. Med.</i> , 137(5):381-433, American College of Physicians (September 2002) |
| | AS | <u>44</u> | Farzan, M., <i>et al.</i> , "A Tyrosine-rich region in the N terminus of CCR5 is important for human immunodeficiency virus type 1 entry and mediates an association between gp120 and CCR5," <i>J. Virol.</i> , 72(2):1160-1164, American Society for Microbiology (February 1998) |
| | AT | <u>44</u> | Fleuridor, R., <i>et al.</i> , "CD1d-restricted natural killer T cells are potent targets for human immunodeficiency virus infection," <i>Immunology</i> 108(1):3-9, Blackwell Publishing Ltd. (January 2003) |

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| | AR | <u>45</u> | Genoud, S., <i>et al.</i> , "CCR5-Mediated human immunodeficiency virus entry depends on an amino-terminal gp120-binding site and on the conformational integrity of all four extracellular domains," <i>J. Virol.</i> 73(2):1645-1648, American Society for Microbiology (February 1999) |
| | AS | <u>45</u> | He, J., <i>et al.</i> , "Human immunodeficiency virus type 1 viral protein R (Vpr) arrests cells in the G ₂ phase of the cell cycle by inhibiting p34 ^{cdc2} activity," <i>J. Virol.</i> 69(11):6705-6711, American Society for Microbiology (1995) |
| | AT | <u>45</u> | Holland, A.U., <i>et al.</i> , "α-complementation assay for HIV envelope glycoprotein-mediated fusion," <i>J. Virol.</i> 319:343-352, Elsevier Inc. (February 2004) |

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| | AR | <u>46</u> | Hong, Y-L., <i>et al.</i> , "New reporter cell lines to study macrophage-tropic HIV envelope protein- mediated cell-cell fusion," <i>AIDS Res. Hum. Retroviruses</i> 15(18):1667-1672, Mary Ann Liebert, Inc. (1999) |
| | AS | <u>46</u> | Howell, D.N., <i>et al.</i> , "Natural killing target antigens as inducers of interferon: studies with an immunoselected, natural killing-resistant human T-lymphoblastoid cell line," <i>J. Immunol.</i> 134:971-976, The American Association of Immunologists (1985) |
| | AT | <u>46</u> | Kedzierska, K., <i>et al.</i> , "The Influence of cytokines, chemokines and their receptors on HIV-1 replication in monocytes and macrophages," <i>Rev. Med. Virol.</i> 13:39-56, John Wiley and Sons, Ltd. (January-February 2003) |

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FORM PTO-1449

**SECOND SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT**

ATTY. DOCKET No.
1488.115000P/EKS/HCC

APPLICATION No.
10/791,905

APPLICANT(S)
Li *et al.*

FILING DATE
March 4, 2004

ART UNIT
1647

U.S. PATENT DOCUMENTS

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| | AR | <u>47</u> | Kilby, J.M. and Eron, J.J. "Novel therapies based on mechanisms of HIV-1 cell entry," <i>N. Engl. J. Med.</i> 384:2228-2238, Massachusetts Medical Society (May 2003) |
| | AS | <u>47</u> | Königs, C., <i>et al.</i> , "Monoclonal antibody screening of a phage-displayed random peptide library reveals mimotopes of chemokine receptor CCR5: implications for the tertiary structure of the receptor and for an N-terminal binding site for HIV-1 gp120," <i>Eur. J. Immunol.</i> 30:1162-1171, Wiley-VCH Verlag GmbH (April 2000) |
| | AT | <u>47</u> | Kottlilil, S., <i>et al.</i> , "Expression of chemokine and inhibitory receptors on natural killer cells: effect of immune activation and HIV viremia," <i>J. Infect. Dis.</i> 189:1193-1198, National Institute of Allergy and Infectious Diseases (April 2004) |

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| | AR | <u>48</u> | Lachgar, A., <i>et al.</i> , "Binding of HIV-1 to RBCs involves the Duffy antigen receptors for chemokines (DARC)," <i>Biomed. & Pharmacother.</i> 52:436-439, Elsevier (1998) |
| | AS | <u>48</u> | Lalezari, J.P., <i>et al.</i> , "Enfuvirtide, an HIV-1 fusion inhibitor, for drug-resistant HIV infection in North and South America," <i>N. Engl. J. Med.</i> 348(22):2175-2185, Massachusetts Medical Society (May 2003); correction attached, <i>N. Engl. J. Med.</i> 349(11):1100 (September 2003) |
| | AT | <u>48</u> | Lin, Y-L., <i>et al.</i> , "Cell surface CCR5 density determines the postentry efficiency of R5 HIV-1 infection. <i>Proc. Natl. Acad. Sci. U.S.A.</i> 99(24):15590-15595, The National Academy of Sciences (November 2002) |

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| | AR | <u>49</u> | Lin, P-F., <i>et al.</i> , "A small molecule HIV-1 inhibitor that targets the HIV-1 envelope and inhibits CD4 receptor binding," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 100(19):11013-11018, The National Academy of Sciences (September 2003) |
| | AS | <u>49</u> | Liu, R., <i>et al.</i> , "Homozygous defect in HIV-1 coreceptor accounts for resistance of some multiply-exposed individuals to HIV-1 infection," <i>Cell</i> 86:367-377, Cell Press (August 1996) |
| | AT | <u>49</u> | Lopalco, L., <i>et al.</i> , "CCR5-Reactive antibodies in seronegative partners of HIV-seropositive individuals down-modulate surface CCR5 in vivo and neutralize the infectivity of R5 strains of HIV-1 in vitro," <i>J. Immunol.</i> 164:3426-3433, The American Association of Immunologists (March 2000) |

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| | AR | <u>50</u> | Lusso, P., <i>et al.</i> , "Growth of macrophage-tropic and primary human immunodeficiency virus type 1 (HIV-1) isolates in a unique CD4+ T-cell clone (PM1): Failure to downregulate CD4 and to interfere with cell-line-tropic HIV-1," <i>J. Virol.</i> 69:3712-3720, American Society for Microbiology (1995) |
| | AS | <u>50</u> | Lyerly, H.K., <i>et al.</i> , "Anti-gp 120 antibodies from HIV seropositive individuals mediate broadly reactive anti-HIV ADCC," <i>AIDS Res. Hum. Retroviruses</i> 3:409-422, Mary Ann Liebert, Inc. (1987) |
| | AT | <u>50</u> | Martin, J.C. and Bandrés, J.C., "Cells of the monocyte-macrophage lineage and pathogenesis of HIV-1 infection," <i>J. Acquir. Immune Defic. Syndr.</i> 22(5):413-440, Lippincott Williams and Wilkins, Inc. (1999) |

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| | AR | <u>51</u> | Mirzabekov, T., <i>et al.</i> , "Enhanced Expression, Native Purification, and Characterization of CCR5, a Principal HIV-1 Coreceptor," <i>J. Biol. Chem.</i> 274(40):28745-28750, The American Society for Biochemistry and Molecular Biology, Inc. (1999) |
| | AS | <u>51</u> | Moore, J.P., <i>et al.</i> , "The CCR5 and CXCR4 coreceptors--central to understanding the transmission and pathogenesis of human immunodeficiency virus type 1 infection," <i>AIDS Res. Hum. Retroviruses</i> 20(1):111-126, Mary Ann Liebert, Inc. (January 2004) |
| | AT | <u>51</u> | Moosmann, P. and Rusconi, S., "Alpha complementation of LacZ in mammalian cells," <i>Nucleic Acids Res.</i> 24(6):1171-1172, Oxford University Press (March 1996) |

EXAMINER

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U.S. PATENT DOCUMENTS

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| | AR | <u>52</u> | Mueller, A., <i>et al.</i> , "Pharmacological characterization of the chemokine receptor, CCR5," <i>Br. J. Pharmacology</i> 135(4):1033-1043, Nature Publishing Group (February 2002) |
| | AS | <u>52</u> | Münch, J., <i>et al.</i> , "Hemofiltrate CC chemokine 1[9-74] causes effective internalization of CCR5 and is a potent inhibitor of R5-tropic human immunodeficiency virus type 1 strains in primary T cells and macrophages," <i>Antimicrob. Agents Chemother.</i> 46:982-990, The American Society for Microbiology (April 2002) |
| | AT | <u>52</u> | Nansen, A., <i>et al.</i> , "The role of CC chemokine receptor 5 in antiviral immunity," <i>Blood</i> 99(4):1237-1245, The American Society of Hematology (February 2002) |

EXAMINER

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| | AR | <u>53</u> | Nieto, M., <i>et al.</i> , "Roles of chemokines and receptor polarization in NK-target cell interactions," <i>J. Immunol.</i> 161:3330-3339, The American Association of Immunologists (1998) |
| | AS | <u>53</u> | Perera, L.P., <i>et al.</i> , "IL-15 induces the expression of chemokines and their receptors in T lymphocytes," <i>J. Immunol.</i> 162:2606-2612, The American Association of Immunologists (1999) |
| | AT | <u>53</u> | Pozniak, A.L., <i>et al.</i> , "Effect of short-term monotherapy with UK-427,857 on viral load in HIV-infected patients," <i>Program and abstracts from the 43rd Annual Interscience Conference on Antimicrobial Agents and Chemotherapy</i> (43rd ICAAC), pp.14-17, Coe-Truman Technologies, Inc. (September 2003) |

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| | AR | <u>54</u> | Rabut, G.E.E., <i>et al.</i> , "Alanine substitutions of polar and nonpolar residues in the amino-terminal domain of CCR5 differently impair entry of macrophage- and dualtropic isolates of human immunodeficiency virus type 1," <i>J. Virol.</i> 72(4):3464-3468, American Society for Microbiology (1998) |
| | AS | <u>54</u> | Reeves, J.D., <i>et al.</i> , "Sensitivity of HIV-1 to entry inhibitors correlates with envelope/coreceptor affinity, receptor density, and fusion kinetics," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 99(25):16249-16254, The National Academy of Sciences (December 2002) |
| | AT | <u>54</u> | Reynes, J., <i>et al.</i> , "CD4+ T cell surface CCR5 density as a determining factor of virus load in persons infected with human immunodeficiency virus type1," <i>J. Infect. Dis.</i> 181:927-932, The Infectious Diseases Society of America (March 2000) |

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| | AR | <u>55</u> | Richman, D.D., <i>et al.</i> , "Rapid evolution of the neutralizing antibody response to HIV type 1 infection," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 100(7):4144-4149, The National Academy of Sciences (April 2003) |
| | AS | <u>55</u> | Roederer, M., <i>et al.</i> , "HIV does not replicate in naive CD4 T cells stimulated with CD3/CD28," <i>J. Clin. Invest.</i> 99(7):1555-1564, The American Society for Clinical Investigation, Inc. (1997) |
| | AT | <u>55</u> | Rottman, J.B., <i>et al.</i> , "Cellular localization of the chemokine receptor CCR5: correlation to cellular targets of HIV-1 infection," <i>Amer. J. Path.</i> 151(5):1341-1351, American Society for Investigative Pathology (1997) |

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| | AR | <u>56</u> | Rucker, J., <i>et al.</i> , "Regions in β -chemokine receptors CCR5 and CCR2b that determine HIV-1 cofactor specificity," <i>Cell</i> 87:437-446, Cell Press (November 1996) |
| | AS | <u>56</u> | Samson, M., <i>et al.</i> , "The second extracellular loop of CCR5 is the major determinant of ligand specificity," <i>J. Biol. Chem.</i> 272(40):24934-24941, American Society for Biochemistry and Molecular Biology, Inc. (1997) |
| | AT | <u>56</u> | Samson, M., <i>et al.</i> , "Resistance to HIV-1 infection in Caucasian individuals bearing mutant alleles of the CCR-5 chemokine receptor gene," <i>Nature</i> 382(22):722-725, Nature Publishing Group (August 1996) |

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| | AR | <u>57</u> | Schecter, A.D., <i>et al.</i> , "Human vascular smooth muscle cells possess functional CCR5," <i>J. Biol. Chem.</i> , 275(8):5466-5471, American Society for Biochemistry and Molecular Biology, Inc. (October 2000) |
| | AS | <u>57</u> | Siciliano, S.J., <i>et al.</i> , "A critical site in the core of the CCR5 chemokine receptor required for binding and infectivity of human immunodeficiency virus type 1," <i>J. Biol. Chem.</i> 274(4):1905-1913, American Society for Biochemistry and Molecular Biology, Inc. (1999) |
| | AT | <u>57</u> | Spina, C.A., <i>et al.</i> , "Preferential replication of HIV-1 in the CD45RO memory cell subset of primary CD4 lymphocytes in vitro," <i>J. Clin. Invest.</i> 99(7):1774-1785, The American Society for Clinical Investigation, Inc. (1997) |

EXAMINER

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ATTY. DOCKET No.
1488.115000P/EKS/HCC

APPLICATION No.
10/791,905

APPLICANT(S)
Li et al.

FILING DATE
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ART UNIT
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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

| | | | |
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| | AR | <u>58</u> | Spira, S., <i>et al.</i> , "Impact of clade diversity on HIV-1 virulence, antiretroviral drug sensitivity and drug resistance," <i>J. Antimicrob. Chemother.</i> 51:229-240, The British Society for Antimicrobial Chemotherapy (January 2003) |
| | AS | <u>58</u> | Starr-Spires, L.D. and Collman, R.G. "HIV-1 entry and entry inhibitors as therapeutic agents," <i>Clin. Lab. Med.</i> 22:681-701, Elsevier Science (USA) (September 2002) |
| | AT | <u>58</u> | Steinberger, P., <i>et al.</i> , "Functional deletion of the CCR5 receptor by intracellular immunization produces cells that are refractory to CCR5-dependent HIV-1 infection and cell fusion," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 97(2):805-810, The National Academy of Sciences (January 2000) |

EXAMINER

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

| | | | |
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| | AR | <u>59</u> | Strizki, J.M., <i>et al.</i> , "SCH-C (SCH 351125), an orally bioavailable, small molecule antagonist of the chemokine receptor CCR5, is a potent inhibitor of HIV-1 infection <i>in vitro</i> and <i>in vivo</i> ," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 98(22):12718-12723, The National Academy of Sciences (October 2001) |
| | AS | <u>59</u> | Thormeyer, D., <i>et al.</i> , "Characterization of lacZ complementation deletions using membrane receptor dimerization," <i>BioTechniques</i> 34:346-355, Eaton Publishing (February 2003) |
| | AT | <u>59</u> | Trkola, A., <i>et al.</i> , "HIV-1 escape from a small molecule, CCR5-specific entry inhibitor does not involve CXCR4 use," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 99(1):395-400, The National Academy of Sciences (January 2002) |

EXAMINER

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| | AR | <u>60</u> | Trkola, A., <i>et al.</i> , "A cell line-based neutralization assay for primary human immunodeficiency virus type 1 isolates that use either the CCR5 or the CXCR4 coreceptor," <i>J. Virol.</i> 73(11):8966-8974, American Society for Microbiology (November 1999) |
| | AS | <u>60</u> | Trkola, A., <i>et al.</i> , "Potent, broad-spectrum inhibition of human immunodeficiency virus type 1 by the CCR5 monoclonal antibody PRO 140," <i>J. Virol.</i> 75(2):579-588, American Society for Microbiology (January 2001) |
| | AT | <u>60</u> | Tuttle, D.L., <i>et al.</i> , "Expression of CCR5 increases during monocyte differentiation and directly mediates macrophage susceptibility to infection by human immunodeficiency virus type 1," <i>J. Virol.</i> 72(6): 4962-4969, American Society for Microbiology (1998) |

EXAMINER

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| | AR | <u>61</u> | Unutmaz, D. and Littman, D.R. "Expression pattern of HIV-1 coreceptors on T cells: Implications for viral transmission and lymphocyte homing," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 94:1615-1618, The National Academy of Sciences (1997) |
| | AS | <u>61</u> | Van Rij, R.P., <i>et al.</i> , "Differential coreceptor expression allows for independent evolution of non-syncytium-inducing and syncytium-inducing HIV-1," <i>J. Clin. Invest.</i> 106(8):1039-1052, The American Society for Clinical Investigation, Inc. (October 2000) |
| | AT | <u>61</u> | Wahl, S.M., <i>et al.</i> , "Permissive factors for HIV-1 infection of macrophages," <i>J. Leukoc. Biol.</i> 68(3):303-310, The Society of Leukocyte Biology (September 2000) |

EXAMINER

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| | AR | <u>62</u> | Wahl, S.M., <i>et al.</i> , "Viral and host cofactors facilitate HIV-1 replication in macrophages," <i>J. Leukoc. Biol.</i> 74(5):726-735, The Society of Leukocyte Biology (November 2003) |
| | AS | <u>62</u> | Wang, Z., <i>et al.</i> , "CCR5 HIV-1 coreceptor activity. Role of cooperativity between residues in N-terminal extracellular and intracellular domains," <i>J. Biol. Chem.</i> 274(40):28413-28419, American Society for Biochemistry and Molecular Biology, Inc. (1999) |
| | AT | <u>62</u> | Weinhold, K.J., <i>et al.</i> , "Measurement of direct and indirect forms of anti-HIV-1 ADCC: Implications for other retroviral disease," <i>Dev. Biol. Standard</i> 72:343-348, 21 st Congress of the IABS on Progress in Animal Retroviruses, S. Karger (1990) |

EXAMINER

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| AR | <u>63</u> | Welply, J.K., <i>et al.</i> , "β-Galactosidase α-complementation," <i>J. Biol. Chem.</i> 256(13):6804-6810, American Society for Biochemistry and Molecular Biology, Inc. (1981) |
| AS | <u>63</u> | Woods, T.C., <i>et al.</i> , "Loss of inducible virus in CD45RA naive cells after human immunodeficiency virus-1 entry accounts for preferential viral replication in CD45RO memory cells," <i>Blood</i> 89(5):1635-1641, American Society of Hematology (1997) |
| AT | <u>63</u> | Wu, L., <i>et al.</i> , "CCR5 levels and expression pattern correlate with infectability by macrophage-tropic HIV-1, in vitro," <i>J. Exp. Med.</i> 185(9):1681-1691, The Rockefeller University Press (May 1997) |

EXAMINER

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| | AR | <u>64</u> | Co-pending U.S. Application No. 10/994,679, inventors Roschke, V. <i>et al.</i> , filed November 23, 2004 (NOT PUBLISHED) |
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